QSA

QUALITY SYSTEMS ASSESSMENT

Ambulance Service of NSW

Summary of findings for the Ambulance Service of NSW

Data submitted February – April 2008

CLINICAL EXCELLENCE COMMISSION

This report can be downloaded from
www.cec.health.nsw.gov.au

Foreword

The development of a Quality Systems Assessment Program (QSA) was one of the key recommendations of the NSW Patient Safety and Clinical Quality Program originating from the Walker report into Camden and Campbelltown hospitals. A key function of the Clinical Excellence Commission (CEC) outlined in the NSW Patient Safety and Clinical Quality Program was to develop and conduct quality system assessments of public health organisations (PHOs) and recommend improvements to the NSW health system.

The aim of the QSA is to provide assurance about the quality and safety of health care provided by public health services in NSW and compliance with standards and policy requirements developed by NSW Department of Health. The QSA has been specifically developed for the eight Area Health Services (AHS), the Children's Hospital at Westmead, Ambulance Service of NSW and Justice Health. The QSA provides a focus on current and future risks and has identified areas for continuous improvement of clinical quality and safety. It also highlights areas of exemplary practice relating to clinical quality and patient safety. The QSA complements current accreditation activities without replacing or duplicating them.

This report represents the first census of the quality and safety policies and their level of implementation for the Ambulance Service of NSW.   There was a very high degree of response from all levels of the service.

This report clearly identifies areas of exemplary performance, particularly in relation to the implementation of incident management policies and further identifies areas for improvement, such as extending the programs and protocols in place for non transport of patients.

The CEC commends this report to you and encourages you to engage actively with the Ambulance officers in your service to develop improvement plans for patients in NSW.

We congratulate the staff of Clinical Development of the Ambulance Service of NSW who worked closely with the CEC QSA development team to achieve a successful implementation and data acquisition from the self-assessment process.

We strongly urge the Ambulance Service of NSW to participate in further QSA self-assessments throughout 2009.

Sincerely,
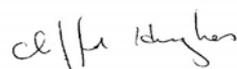
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Chief Executive Officer
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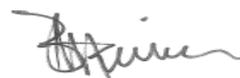
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1   Executive Summary

This report presents the results of the first QSA survey of the Ambulance Service of NSW which was undertaken from February to April 2008. The survey covered three levels of the system – the statewide administration level; the four divisions and the eleven sectors responsible for delivery of Ambulance Services at the operational unit level. These results provide a baseline measure of the self-assessment of the services' performance in the implementation of various quality and safety programs and policies.

Currently the Ambulance Service of NSW undertakes no formal method of accreditation for assessing whole of organisation performance in relation to quality and safety process, although ad hoc external audits have been undertaken and a strong focus on improvement is being fostered within the organisation.

A high level of response was achieved for the first QSA, with all of the nominated services at each system level completing the survey. The Aeromedical & Retrieval Services Division and the Special Operations Unit were not included in this QSA. They will be subject to future QSA surveys.

The survey has demonstrated that the Ambulance Service of NSW has established key clinical quality and patient safety governance structures and processes for identifying, improving and reporting risks to quality and safety. These include:
- The establishment of a Clinical Governance Committee at state level
- The establishment of Clinical Quality Committees at divisional level
- Implementation of the Incident Information Management System (IIMS)
- Routine reporting and communication of a set of key performance indicators
- Development of projects that specifically target areas identified as having the potential to cause harm to patients e.g. TABLETS (Tablets are Bagged Letting Emergency Treat Safely) and CARE (Clinical Assessment and Referral) program
- Credentialing and recertification processes are in place
- Clear and well communicated process for receipt of patient and carer complaints.

From the self-assessments the Ambulance Service of NSW has identified areas of potential vulnerabilities and also opportunities for improving the quality of clinical care and patient safety. They include:
- The process of implementing key quality improvement policies and guidelines
- Ensuring patient safety and clinical quality information is being communicated effectively to all levels of the system and
- Audit and evaluation occurs to ensure that the required changes are implemented effectively.

The highest risks to patient safety were identified by the respondents as:

- The safe management of patients not transported to hospital
- Time on scene for specific conditions
- Incorrect procedures
- Medication management
- Compliance in completion of the patient health care record (PHCR).

The main opportunities for improvement are:

- Integration of the current risk management system and introduction of risk registers throughout the service
- Clarification of the system for communication and follow-up of patient safety alerts
- Improved communication to all levels of the service regarding outcomes of Root Cause Analysis (RCA) investigations
- Formalising processes to ensure that changes made in response to analysis of clinical incident investigations have been implemented and followed up to evaluate outcomes
- Ensuring the open disclosure process occurs routinely
- Improved feedback to sectors on the outcomes of death reviews
- Developing 'best practice' models, working with the NSW Health Department, for review activities such as clinical audit, PHCR review and peer review
- To continue extending the programs and protocols in place for non transport of patients
- Ensuring all Ambulance officers undergo regular performance review.

As part of the assessment process the QSA project team met with the General Manager and staff of Clinical Development to gain a further understanding of the service and ensure the findings of the survey reflected practice. Further clarification around the responses was gained from the Clinical Development team as well as from documentary evidence of initiatives and outcomes. Some of this information has been added to the report, where appropriate.

This initial census of clinical quality and safety systems has been undertaken to identify what is currently in place in the state, divisions and sectors of the Ambulance Service across NSW. Subsequent QSA surveys will be tailored specifically for the service to look at the level of implementation and effectiveness of the policy initiatives and there will be an emphasis on having station managers included in future assessments.

2   Key Recommendations

The key recommendations outlined below have been determined on the basis of the results of the analysis of responses to the Quality Systems Assessment at the state, division and sector level of the Ambulance Service of NSW.

2.1   Governance

2.1.1   All Severity Assessment Code (SAC) 1 investigation reports and death reviews must be reported to the Clinical Governance Committee (page 23).

2.1.2   The Ambulance Service of NSW must ensure all sectors have a dedicated forum for review and discussion of items relating to quality and safety performance issues (page 24).

2.2   Risk Identification and Management

2.2.1   The Ambulance Service of NSW needs to develop a more uniform, integrated system for the identification and management of patient safety and clinical risks throughout the service (page 27).

2.2.2   The Ambulance Service of NSW must have systems in place to ensure, that in addition to the circulation of patient safety alerts, there are defined accountabilities to ensure that changes are made. Further an evaluation / audit process is undertaken to "close the loop" in terms of ensuring patient safety and quality (page 28).

2.3   Performance Review

The Ambulance Service of NSW must ensure the provision of ongoing performance review of all personnel throughout the organisation (page 31).

2.4   System wide Communication

2.4.1   The Ambulance Service of NSW must have systems in place to ensure that in relation to clinical indicators and Key Performance Indicators (KPIs):
- Changes in policy and or KPIs are disseminated throughout the service
- That the dissemination 'modes' are effective and
- There is a formal process to evaluate the implementation and efficacy of changes (page 33).

2.4.2   The Ambulance Service of NSW must ensure that the findings of any review of critical incidents or root cause analysis are fed back to the relevant staff and ensure that all officers are aware of the process for accessing this information (page 36).

2.5 Death Review

The Ambulance Service of NSW must have in place a consistent and timely process for auditing 'reviewable deaths' and ensure that findings are fed back to the Clinical Governance Committee and relevant staff in a timely manner (page 38).

2.6 Open Disclosure

The Ambulance Service of NSW must ensure that the following steps are in place to support the implementation of the open disclosure policy:

- provide adequate training in the open disclosure process
- provide support for the staff involved in the process and
- ensure adequate documentation in the patient health care record (page 40).

2.7 Quality Review Activities

2.7.1   Working in partnership with NSW Health, the Ambulance Service of NSW must establish 'best practice' models for staff to undertake clinical audit, patient health care record review, peer review or other quality review activities (page 43).

2.7.2   The Ambulance Service of NSW must ensure that communication regarding the piloting and introduction of new procedures is effectively provided to operational units (page 46).

2.8 Infection Control

The Ambulance Service of NSW continue to adapt current NSW Health policies on infection control that meet the specific needs and challenges of the Ambulance service and audit performance against this policy (page 48).

2.9 Patient Safety

2.9.1   The Ambulance Service of NSW needs to continue to carefully review current policies and practice in regard to the non transport of patients, such as CARE (Clinical Assessment and Referral) and ECP (Extended Care Paramedics), and identify opportunities to improve existing protocols (page 53).

2.9.2   The Ambulance Service of NSW needs to continue its current audits of the patient health care record (page 54).

2.10 Quality Systems Assessment (QSA)

The CEC needs to develop a targeted self-assessment for the 2008/2009 QSA based on the issues identified from this report. The 2008 / 2009 survey will include station officer level for the purpose of identifying progress with issues identified (page 55).

Expectations from the QSA report

The Clinical Excellence Commission (CEC) has developed an overall report of the Ambulance Service of NSW which provides an assessment of the state of safety and quality management systems. All the Ambulance Service data collected through the self assessment has been returned to the Clinical Development team in an Excel spreadsheet format.

It is expected that these resources will be used by the individual divisions or sectors to review their data and respond to issues raised to identify areas with greatest risk and vulnerability and develop improvement plans to address them.

The expectation of the CEC is that each level will:

- Develop an improvement plan based on the information obtained from the QSA. This would include:
    - Statewide recommendations
    - Statewide themes identified in the risks to patient safety
- Develop the improvement plan with involvement of the state senior executive
- Regularly monitor and report on the progress of the development and implementation of the improvement plan to the Ambulance Service peak Quality Committee (the Clinical Governance Committee) and the CEC
- Ensure individual divisions and sectors review their own responses to the QSA. If they have identified patient safety risks not included in the state improvement plan they need to put in place actions to minimise these risks
- Send an initial copy of the improvement plan to the CEC three months after the release of this report.

The improvement plans will be reviewed as part of the onsite verification program and a formal written report will be provided to the CEC at 12 months on the progress of implementation.

3   Background

The Patient Safety and Clinical Quality Program (PSCQP) was launched in 2005, following the inquiry into Campbelltown and Camden hospitals (Walker, 2004). The cornerstones of the PSCQP are:

- Provision of a standardised system for managing, reporting and investigating incidents to ensure that risks are identified and steps are taken to prevent recurrence
- Provision of an electronic Incident Information Management System (IIMS) to support centralised reporting and recording of incidents
- Establishment of clinical governance units in each area health service
- Development of a Quality Systems Assessment (QSA) framework and
- Establishment of the Clinical Excellence Commission (CEC) in 2005 (replacing the Institute for Clinical Excellence) to support and promote systemic improvements.

A key responsibility of the CEC outlined in the NSW PSCQP was to develop and undertake a QSA for all public health organisations (PHOs) in New South Wales.

In 2005, NSW Health produced the *QSA– framework* for the assessment of quality systems in all health services (NSW Health, 2005). The framework was based on the seven standards in the PSCQP, with which all public health organisations (PHOs) were required to comply. Following an unsuccessful open tender process in May 2005 to contract a suitable proponent to provide the QSA, the CEC decided on a different approach to developing a workable methodology for the QSA. An extensive international literature review of quality and safety assessment systems in both health and non-health settings were undertaken. It identified the utility of self-assessment models in use in non-health settings such as tax, mining, petroleum and the financial sector. A decision was made to develop a tailored self-reporting QSA for use in NSW.

In March 2006 KPMG, Risk Advisory Services, were contracted to work with the QSA Development Team to develop a suitable methodology. As a result of this work, an assessment methodology that relies on self-assessment through the completion of a web-based activity statement by all PHOs in NSW was developed. This first stage development included key stakeholder consultations and provided the framework, methodology and Area Health Service (AHS) level self-assessment tool for the QSA. The methodology is described in detail in Section 4 of this report.

In July 2006 a 'proof of concept' exercise was undertaken through a pilot program involving three AHSs. It indicated a positive result, with the feasibility and validity of the model endorsed by the participating services.

Following a subsequent tender process KPMG was engaged in December 2006 to further develop the methodology. The focus of this second stage development from December 2006-September 2007 was on developing assessment criteria and tools for health services at the facility and department /clinical unit level as well as for Justice Health and the Ambulance Service of NSW. Substantial consultation with AHSs occurred via a series of workshops. All tools were piloted.

The QSA methodology allows for development of reporting that will provide meaningful comparison and address issues of relative risk while allowing the CEC and Ambulance Service of NSW to identify themes, trends, key issues and opportunities for improvement.

4 The Quality Systems Assessment (QSA) program

4.1 The QSA methodology

The methodology underlying the QSA is based on a risk management framework and draws experiences from other industries, including mining, petroleum and finance. In those industries there has been a shift to a risk-based approach to management of safety and quality. The international evidence supports an approach to safety improvement based on the identification and assessment of risks, followed by proportionate action to reduce those risks.

There are four components of the QSA. These are:
- Completion of a self-assessment survey at three levels of the organisation (the activity statement)
- Verification of the activity statements
- Feedback and reporting to respondents, the health system and the community
- Development of improvement plans at each level of the organisation to respond to the issues identified in the self-assessment process. The improvement plan will be subject to review in subsequent QSA assessments.

4.1.1 Activity statements

The QSA activity statements have been designed to enable public health organisations to respond to a series of open and closed questions in a web-based module. The online format facilitates the speed of distribution and significantly lessens the burden of data collection and collation.

The activity statements consist of a series of specific open and closed questions under the six domains and described and presented in their totality in the QSA report.

The NSW PSCQP identifies seven quality and safety standards with which all area health services are required to comply (NSW Health, 2005). These standards outline requirements for:
- Systems to monitor and review patient safety
- Effective clinical governance
- Incident management systems
- Complaints management systems and their use to improve patient care
- Systems to assess core adverse event rates by periodical medical record review
- Processes for performance review of clinicians by their peers to maintain best practice and improve patient care
- Audits of clinical practice.

These standards guide the development of the QSA activity statements and the development of its six domains:

- Governance
- Risk management
- Clinical indicators
- Incident management
- Review activities
- Complaints management.

Some of these standards lack any policy framework, or the existing policies and guidelines are either out of date, or do not provide sufficient clarity on key elements which can be assessed (KPMG, QSA Program Final Report 2007, p23). These standards include the areas of peer review, medical record audit and clinical audit. The QSA has addressed this shortfall by identifying associated key elements as developmental and by asking more open-ended questions as a means of assessment.

The relevant statewide policies and the Ambulance Service of NSW standard operating policies governing these domains are listed in Appendix One of this report.

4.1.2   Verification process

The verification process includes five methods to confirm the activity statements responses. These will be:

- Same level
- Between level
- Source of evidence
- Desktop review
- Targeted interview verification, which may consist of telephone consultation and site visits.

4.1.3   Feedback process

A key element of the QSA process is the reporting-back to stakeholders of findings from the assessment activities. The methodology provides for the development of reporting which enables meaningful comparison between organisations and addresses issues of relative risk.

The reports include:

- A high-level statewide report to the health system and the public, such as contained in this report, providing an assessment of the overall state of safety and quality management systems in the Ambulance Service of NSW.
- All data collected at each service level will be returned to the service. This will enable the Ambulance Service to continue to analyse, generate ad hoc reports and utilise results to develop improvement plans.

4.1.4 Improvement plans

One of the critical elements of the QSA is the focus on identifying opportunities for improvement. Rather than assigning a pass or fail, the aim is to identify areas of poor or inconsistent performance.

Once these have been identified, educational materials and practice improvement tools can be provided to assist services to make the required changes. Where performance is inconsistent, exemplar health services demonstrating good practice can be identified and their approach disseminated across the system.

It is expected that the Ambulance Service of NSW will develop its own improvement plan from the results of the QSA and that it will be designed with specific timeframes. The NSW Health Department will have oversight of its development.

The CEC will undertake a formal review of the outcomes of the plans with identified areas requiring improvement assessed in the following year's QSA as illustrated in Figure 1.

Figure 1 The Quality System Assessment model
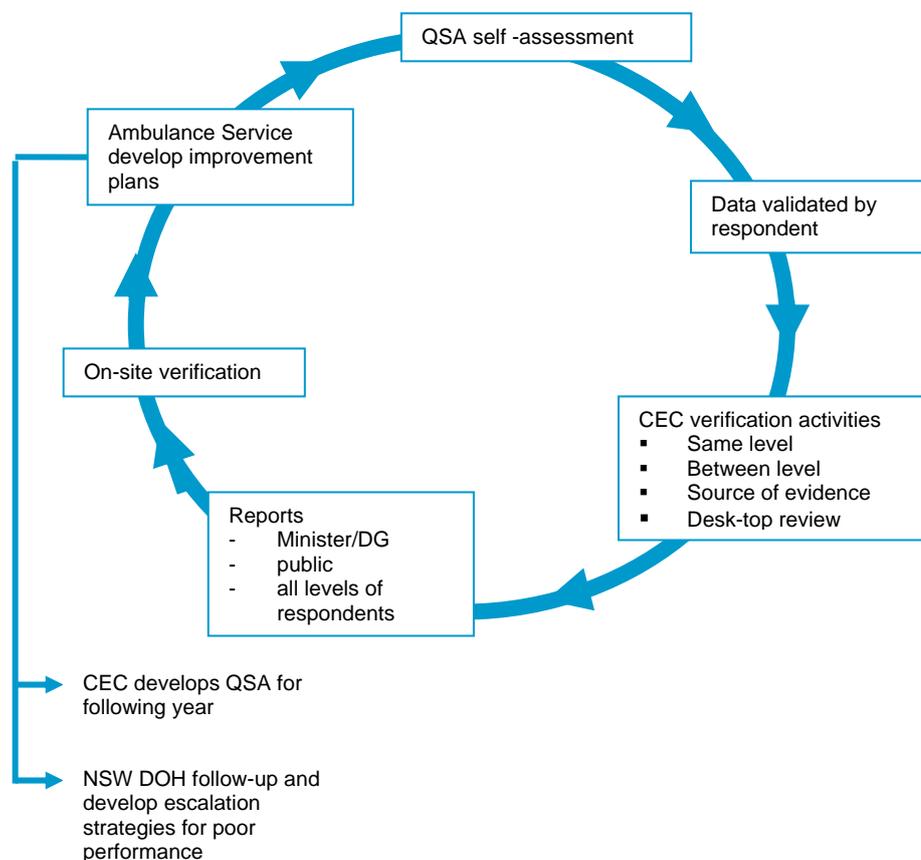
4.2   Frequency of Assessment

Assessment of quality and safety systems using via the QSA methodology will occur on an annual basis. The first survey will provide baseline measures for a comprehensive range of clinical quality and safety elements, with the data re-assessed regularly, every five to seven years. In the intervening years, it is anticipated the surveys will have a thematic approach to targeted areas of assessment. The themes are expected to emerge from the analysis of the first baseline survey results presented in this report. The proposed approach is illustrated in Figure 2.

Figure 2 The overarching framework of the QSA
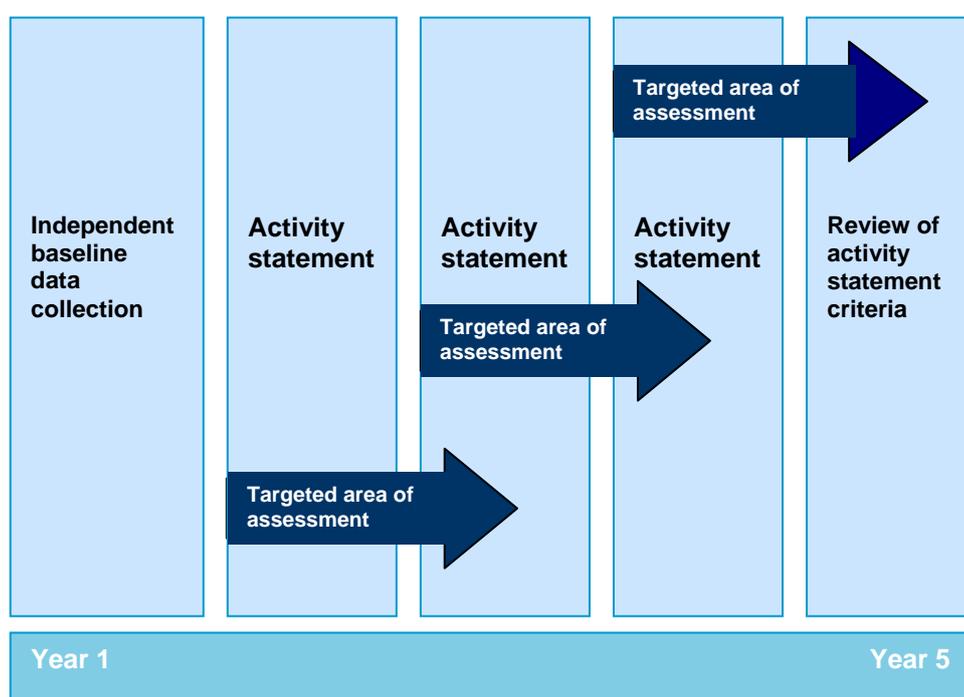
4.3   Program Scope

The QSA encompasses the whole of the NSW public health system which comprises eight area health services, the Children's Hospital at Westmead, the Ambulance Service of NSW and Justice Health.

4.3.1   A multi-level approach to assessment

The QSA features a multi-level approach to quality systems assessment, with activity statements tailored to the different levels within the Ambulance Service as illustrated in Figure 3.

Figure 3 Multi-level assessment and correlation of findings to evaluate the governance system
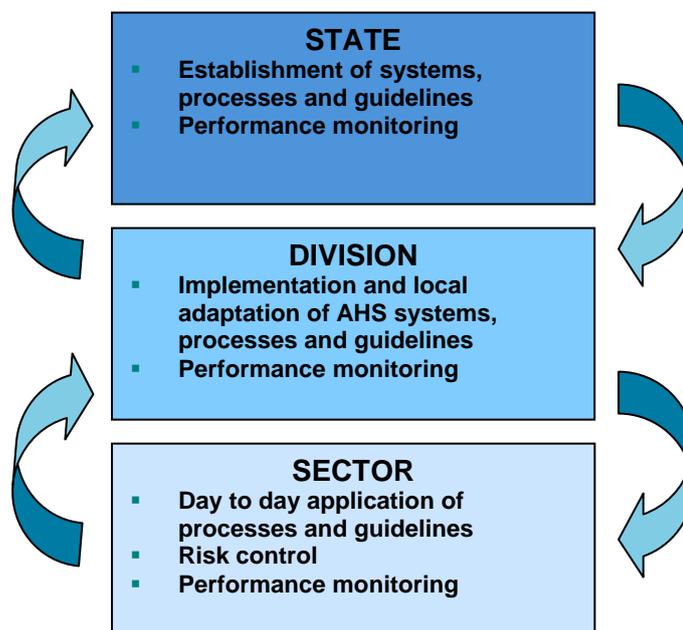
The multi-level approach allows for responses at different levels of the organisation to be correlated, to assess the effectiveness of governing and reporting structures. It is anticipated that this will assist in:

- Identifying statewide policy and program gaps
- Providing a source of verification of self-assessment responses and
- Estimating the degree of effectiveness in the implementation of performance monitoring and risk controls.

4.3.2   Ambulance Service of NSW system levels

Following consultation with the Ambulance Service of NSW it was agreed that the 2008 QSA be undertaken at three service levels:

- State
- Division
- Sector.

The **state** administrative office of the Ambulance Service of NSW is based at Rozelle in Sydney under the direction of the Chief Executive. Services include Operations, Clinical Development, Corporate Services, Finance and Data Services and the Counter Disaster Unit.

Divisions are responsible for the delivery of front line Ambulance services, administrative and business support functions. Each division is supported by an operations centre which coordinates all resources in the particular area. The corresponding operations centres are based at Sydney, Charlestown (Newcastle), Warilla (Wollongong) and Dubbo. Each division is headed by a Divisional Manager, who reports to the General Manager, Operations.

At the time of the QSA survey in February 2008, the Ambulance Service of NSW was divided into eleven **sectors.** The sectors represent the main subdivisions within the divisions. Each sector is managed by an Assistant Divisional Manager who reports to the Divisional Manager. At the sub-regional level, Ambulance stations are grouped into zones under a District Officer who reports to the Assistant Divisional Manager at the sector level.

The Special Operations Unit and the Aeromedical and Medical Retrieval Services Division were not included in this 2008 QSA.

The four divisions and the sectors within each are listed below:
- Sydney
    - Sydney South
    - Sydney North
    - Sydney West
- Northern
    - Central Coast
    - Hunter
    - Mid-North Coast
    - Northern Rivers
- Southern
    - Illawarra
    - Greater Southern.
- Western
    - New England
    - Greater Western

4.4   Program Context

The QSA is designed to complement the broad range of activities already in place to assess, improve or provide assurance on the safety and quality of patient care in NSW. These complimentary activities include:

- Clinical practice improvement (CPI) initiatives (e.g. collaborative projects)
- Accreditation processes
- Policy development
- Credentialing procedures
- Regulation of
  - health service provider organisations
  - health professionals.

The QSA is based on a risk and improvement framework which compliments an accreditation framework which has a regulatory and compliance focus. The CEC views accreditation as having a defined role within this quality framework as part of a continuum of options.

The CEC is cognisant that the Ambulance Service does not currently undergo any external accreditation, unlike the other public health organisations (PHOs) in NSW who undertake the ACHS (Australian Council on Healthcare Standards) EQuIP accreditation. It does however undergo a rigorous external educational audit as part of the requirements of a registered training organisation.

5   Ambulance Service of NSW

The Ambulance Service of NSW is responsible for the delivery of front line pre-hospital care, medical retrieval and health related transport for the population of NSW. A team of highly skilled Paramedics, Intensive Care Paramedics and Patient Transport Officers provide both emergency and non-emergency care to NSW residents. They are supported by a number of special operational units such as Aeromedical, Special Operations Unit, Operations Centres and Systems Support Unit; they were not included in this report but will be subject to future QSA self-assessments.

New South Wales is divided into four divisions containing a total of 226 Ambulance stations. Each division is responsible for service delivery, administrative and business support functions, while the operation centres coordinate all resources in their particular geographical areas. In addition to the four geographic divisions, the Aeromedical and Retrieval Services Division co-ordinates fixed wing and rotary wing services through the Aeromedical Retrieval Unit and Aeromedical Operation Centre. Each division is supported by an operations centre, responsible for receiving all emergency triple 000 telephone requests for Ambulance services from the public, allied health care providers and other emergency services. Operations centres coordinate the movement of Ambulances within their division to meet the needs of the community.

During 2006/2007, Ambulance Service of NSW provided over 1,052,000 responses (both emergency and non-emergency), an average of 2,885 responses per day. There were 880,000 responses in 2006/2007, an increase of 5.5% over 2005/2006. There were a total of 785,000 emergency and 267,000 non-emergency responses in 2006/07.[1]

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[1] http://www.ambulance.nsw.gov.au

6   Ambulance Service of NSW 2007 survey

The QSA self-assessment was undertaken by the Ambulance Service between February and April 2008. The aim of this survey was to establish a baseline of the safety and quality systems and their level of implementation in the Ambulance Service of NSW.

The survey questions guided respondents to provide responses based on activity from January to December 2007. The results provided in this report reflect the status of the organisation at that time; they do not include changes that have occurred since then.

It is expected that the baseline measures obtained through the first QSA survey have:
- Identified characteristics of the existing patient safety management system and differences in approach between organisations and levels
- Identified, where possible, key elements of a robust patient safety quality system and response chains where they exist
- Established improvement aims
- Identified key areas of risk which will be used to inform targeted areas of assessment in later years
- Provided data that can be used to further develop criteria and questions for subsequent activity statements
- Identified existing risk control points.

6.1   Response Rate

The QSA conducted self-assessments at three levels of the Ambulance Service to evaluate the status of quality systems. All assessments were returned completed (Table 1):

Table 1 Ambulance Service of NSW QSA survey response rate

Level of assessment	Surveys sent	Total returned	Response rate %
State	1	1	100%
Division	4	4	100%
Sector	11	11	100%

At the **state** level responsibility for completing the QSA was the Clinical Development team. At the **division** level responsibility for convening the team to undertake the self-assessment was with the divisional manager; at the **sector** level it was the assistant divisional manager.

Many of the domains assessed in the QSA have questions asked at one level of the organisation as well as the same or similar question asked at another organisational level. This approach assists in the verification of the responses provided and shows the extent to which an issue has been implemented within the Ambulance Service. Table 2 shows the topics covered by each survey.

Table 2 Level of assessment for each domain

Domains assessed	State	Division	Sector
Quality governance	✔	✔	
Clinical indicators	✔	✔	✔
Risk management	✔	✔	✔
Incident management	✔	✔	✔
Mortality review	✔	✔	✔
Complaints review	✔	✔	✔
New procedures	✔	✔	✔
Peer review	✔	✔	✔
Clinical audit	✔	✔	✔
Credentialing and performance review	✔	✔	✔
Health care record review		✔	✔
Infection control			✔
Drug calculator	✔		✔

6.2. Data Analysis

Data was collected through an online internet self assessment which was managed by Strategic Data: the data was then provided to the CEC for collation, in an Excel spreadsheet.

Analysis of the quantitative and qualitative data collected at all levels of the self assessment was undertaken by the QSA project team.

Further clarification and verification of the data was gained by telephone and face to face interviews with the General Manager, Clinical Development and staff.

7 Assessment of survey domains – summary of results

7.1 Governance

7.1.1 Committee structure and governance

In accordance with the *NSW Framework for Managing the Quality of Health Services* the Ambulance Service of NSW has established a Clinical Governance Committee which provides the role of the peak committee for clinical governance. The Chief Executive (CE) is a member of this committee and attends all meetings. The Service's commitment to patient safety and clinical quality is clearly outlined in its mission statement and strategic and operational plans.

The role of the Clinical Governance Committee in the review of incident data is outlined in Table 3.

Table 3 State level response - Clinical Governance Committee review of incident/performance data

	Almost always	Often	Sometimes	Rarely	Never
Reports on SAC 1 incident investigations		✔			
Trended data or other information regarding SAC 2, SAC 3 or SAC 4 incidents		✔			
Complaints management performance	✔				
Patient safety and clinical quality KPIs		✔			
Outcomes of death reviews			✔		
Progress on implementation of safety and quality policies	✔				

From the responses to this question there is not routine or mandatory reporting of SAC 1 incident investigations, patient safety and clinical quality KPIs or outcomes of death reviews to the Clinical Governance committee.

Recommendation:

All Severity Access Code 1 investigation reports and death reviews must be reported to the Clinical Governance Committee.

7.1.2   Clinical Development

The NSW Patient Safety and Clinical Quality Program [PSCQP; (2005)] required each area health service to establish an area clinical governance unit (CGU). The focus of the CGU is to oversee the risk management of patient safety and clinical quality through the implementation of the PSCQP.

The Ambulance Service of NSW has established the general management functional area of Clinical Development, as recommended in the PSCQP. The unit has a business plan that has been fully implemented, has been signed off with the Chief Executive and is reviewed and updated quarterly.

The General Manager Operations is responsible for ensuring implementation of the clinical quality and patient safety policies throughout Ambulance NSW operations. Each of the four **divisions** has a Divisional Clinical Quality Committee (DCQC) that oversees the delivery of safe high quality care at an operational level.

This is an example of a DCQC response to a safety and quality issue given by a division:

> *The DCQC identified there was a lack of formal reporting processes regarding patient safety issues. A Divisional Performance reporting process was developed to incorporate patient safety compliance. The Divisional management team monitor overall performance and then report to state on any patient safety issues that arise.*

Three of the divisions agreed and one strongly agreed that the DCQC provides effective governance for patient safety and clinical quality issues.

Seven of the eleven **sector** surveys indicated that they hold a regular meeting that included standing agenda items on a wide range of quality and safety issues that included complaints, clinical indicator performance and clinical audit results. The remaining four sectors indicated that they have no regular meeting.

Recommendation:

The Ambulance Service of NSW must ensure all sectors have a dedicated forum for review and discussion of items relating to quality and safety performance issues.

7.2 **Risk Management**

The Ambulance Service of NSW has established the Performance and Risk Management Committee (PRMC) which reviews all clinical risks within the service. The **state** level survey response indicated that the PRMC considers clinical risk as well as financial and other corporate risks. Clinical risks are listed and managed through the clinical audit plan.

State level response
The Ambulance Service 'business plan' is currently known as the 'Clinical Action and Audit Plan' which is updated every four months by the manager clinical performance; it is then tabled at the Clinical Governance Committee meetings for monitoring /endorsement.

7.2.1 Identification of Risks to Patient Safety

At the **divisional** level safety and quality issues, or clinical risks, are generally identified through review of Incident Information Management System (IIMS) data, review of clinical indicator data, mortality reviews and patient complaints. The response from **sector** level to this question also identifies review of IIMS data and patient complaints as the main source of identifying safety and quality issues (Figure 4).
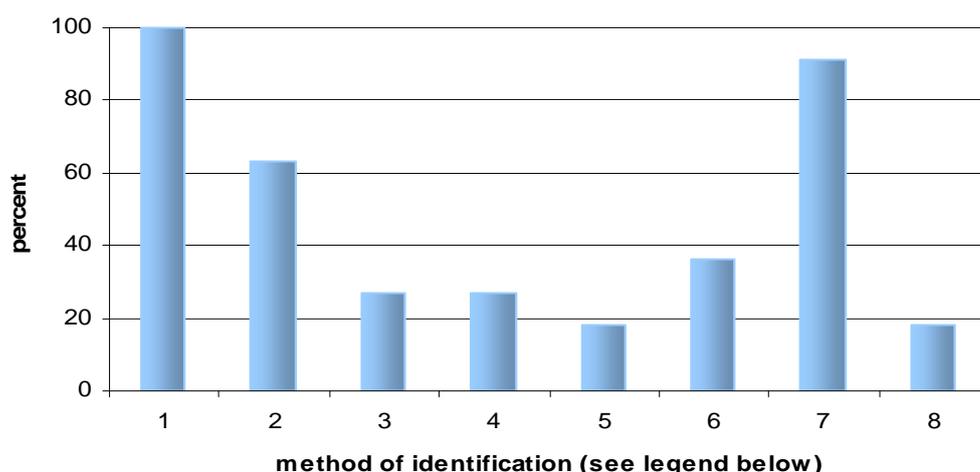
Methods used to identify safety and quality issues

1. Review incidents/IIMS data
2. Review clinical indicator data
3. Patient survey
4. Patient/carer interview
5. Peer review Audit
6 Morbidity and mortality meetings
7. Patient complaints
8. Other

Most respondents placed IIMS first in terms of the method of identifying risks in the system. While the high level of awareness and use of IIMS is commendable, it is important that its use is balanced with other means of identifying potential risks (such as audits and review of clinical indicator data).

Only one of the four **divisions** said that they keep a risk register that includes patient safety risks. When asked if the division had an integrated risk management system, two divisions agreed and two responded "not sure".

At the **sector** level, while information about clinical risks is used to prioritise patient safety improvement projects, only two of eleven sectors keep a risk register that includes patient safety and clinical quality risks.

In response to the question asking whether clinical, corporate and environmental risk management is integrated at a **state** level the state response was "disagree". The same question "Does the sector have an integrated risk management system" was asked at the **sector** level with the response as shown in Figure 5

Figure 5 Sector level response to the question: "Does the sector have an integrated risk management system?"
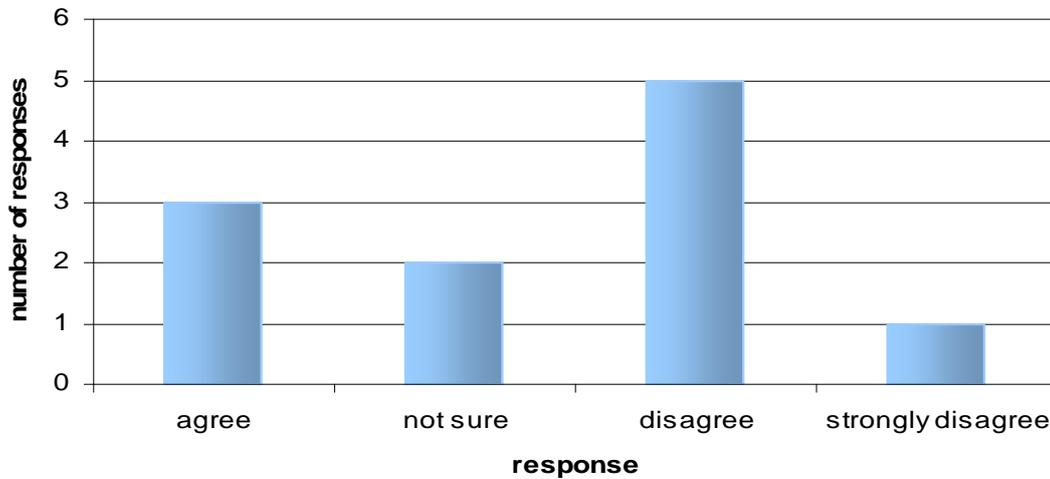
The response from each level to the question about the integration of risk management systems suggests the need for system-wide review of current risk management processes.

Recommendation:

The Ambulance Service of NSW needs to develop a more uniform, integrated system for the identification and management of patient safety and clinical risks throughout the Service.

7.2.2 Management of Risks to Patient Safety

Relevant Policy Framework

The Safety Alert Broadcasting System (SABS) Policy Directive provides information on a systematic approach to the distribution and management of important patient safety information to the NSW health system. The SABS consists of three documents (Safety Alert, Safety Notice, and Safety Information) to provide health services with early warnings and/or notification of issues that may potentially affect patient safety and clinical quality.

At the **state** level Safety Alerts are distributed to all staff via email communication and then *"…loaded onto the Ambulance intranet site".* Follow up of the changes which have been made in response to the safety alert include review by the Patient Safety Manager and inclusion in the clinical action plan if relevant.

At the **division** level the communication of patient safety alerts is by email and clinical bulletins to all staff, stations and sectors. The process for ensuring that changes have been made in

response to patient safety alerts included "..*reviews by District Officers or Divisional Managers*" and "..*random audits*".

All **sector** respondents were able to outline the process for communication of patient safety alerts. An example of a response at sector level is:

> *Communication of patient safety alerts occurs in a variety of media dependant on the urgency and nature of the alert.*

In response to the question "How does the sector follow up to ensure that changes are made in response to patient safety alerts?" one sector replied that it was *"sadly lacking in this sector"* another noted they "…*don't have a robust system to check…"* while two others responded that there was no formal process. The variation in the response to this question across the eleven sectors indicates a need to review processes for communication and follow-up of patient safety alerts.

Recommendation

The Ambulance Service of NSW must have systems in place to ensure, that in addition to the circulation of patient safety alerts, there are defined accountabilities to ensure that changes are made. Further an evaluation / audit process is undertaken to "close the loop" in terms of ensuring patient safety and quality.

Risks to patient safety

As part of the self-assessment the division and sector level respondents were asked to list (in no particular order) what they considered were the three main risks to patient safety. The qualitative analysis of these risks was undertaken by the QSA project team and common themes at each level were identified. The findings of the analysis are reported in section 8 (page 51) of this report.

7.2.3 Quality Improvement Projects

When asked how a safety and quality improvement project had improved the safety of patient care the state level gave the example of the TABLETS (Tablets are Bagged Letting Emergency Treat Safely) program. This program aims to increase the number of patients arriving with their medications at hospital via Ambulance. The focus of the project was to improve the transfer of information at transitions of care. The project won the NSW Health safety award in 2006 for improving patient outcomes.

TABLETS

Aim: to reduce the number of patients over 75 years of age transported by Ambulance officers to Ryde hospital without their medications by 100% in 6 months.

Methodology: a multi-disciplinary project team was formed to devise and implement solutions for the problem. The team consisted of the Ryde hospital director emergency medicine, Ryde hospital quality risk management unit, NSCCAHS medication safety pharmacist, ASNSW patient safety manager, ASNSW station manager and consumer participant.

Diagnostic phase: using the clinical practice improvement methodology a diagnostic phase was undertaken. This included;

- *a flow chart of the process of Ambulance arrival at residence to assessment/admission in hospital:*
- *cause and effect diagram relating to the high incidence of patients over 75 years arriving at hospital via Ambulance transport without their medications:*
- *Pareto distribution chart of the cases of non compliance of Ambulance officers taking patients over 75 years medications to hospital*

Interventions:

- *instructions for officer to include medications with patients who are over 75 years of age (week one)*
- *equipping one Ambulance with clear plastic bags to hold medications (week two) equipping all Ambulances with clear plastic bags to hold medications, with blood pressure (BP) cuff stored in bag (week three)*
- *instruction label included on bag (week six)*
- *data field for recording medications taken stamped onto patient health care record (week ten)*

Results:

- *Week one of the project clearly indicated a high number of patients who were over 75 years of age arriving without their medications*
- *Over the first three month period of the project the rate of medications transported with patients over 75 years increased overall.*
- *In the tenth, eleventh and twelfth weeks of the project the average number of patients who were over 75 years of age arriving with their medications at Ryde Hospital was 77%*
- *Suggesting an improvement compared to the commencement period of the project*
- *Actual numbers also confirm this apparent trend*

The TABLETS program has now been implemented across NSW and is a key clinical quality indicator for the Ambulance Service. It is reported that current statewide performance exceeds the targets set in the Patient Safety and Clinical Quality performance agreement.

7.3   Credentialing and Role Delineation

<table>
<tr><td>**Relevant Policy Framework**</td></tr>
<tr><td>

The credentialing and certification of Ambulance officers is governed by:
- *Certification policy (SOP2007-107) – this document outlines the process to ensure practising Ambulance officers are competent and maintain skills and knowledge relevant to maintaining competency, and*
- *CTP (certificate to practice) Compliance (SOP2007-110) – this document outlines the requirements of all Ambulance officers to hold a current CTP and recertify each two year period*

</td></tr>
</table>

The **state** level response indicated that there is a state policy and a performance indicator on certification of NSW Ambulance officers. The division and sector level are responsible for ensuring Ambulance officers meet these requirements.

The state level does collect information about performance certification on a central database. The database is monitored by Operations and Education staff to ensure all Ambulance officers have met their requirements to practice. The results are reported to the Executive Management Board monthly.

In response to the question how the state level assists officers to meet certification requirements:

State level response
The CTP (certification policy) management system is monitored in collaboration with the education department which ensures that all staff are released to participate in mandatory CTP workshops each cycle. ….The education unit through 12 regional training teams, consisting of paramedic educator (team leader) and clinical training officers facilitate mandatory certification workshops and also facilitate in-station and other continuing professional development opportunities….If staff have shown any clinical performance difficulties an educational action plan is developed.

The replies at the **division** level verify this response with all the divisions identifying the process of needs analysis, education and training and monitoring in relation to staff certification.

7.3.1 Performance Review

The QSA survey defined performance review as "***….a process whereby the practitioner's professional development is enhanced through the provision of regular feedback about their performance, and the identification of appropriate development opportunities.***"

The **state** survey stated that Ambulance officers participate in an annual performance review at the Operations Manager level. If a performance issue was referred to the state level for action it would respond by the process as described below:

State level response
An action plan is negotiated to address the presenting issues and assist the officer to achieve appropriate performance levels. This generally involves periods of mentoring and supervision to not only support the paramedic but also the safety of patients.

In response to the question *"Do Ambulance staff participate in regular performance review?* the four **divisions** answered yes with one noting that *"performance review not down to officer level"*. This is verified by all **sectors** responding that there was no regular performance review of staff.

Recommendation:
The Ambulance Service of NSW must ensure the provision of ongoing performance review of all personnel throughout the organisation.

7.4   Clinical Indicators

Relevant Policy Framework

As part of NSW Department of Health's Patient Safety and Clinical Quality Key Performance Indicators the Ambulance Service has a policy (SOP2007-016) which outlines the Key Performance Indicators it will use. These include wrong site procedures; medication management; equipment reliability; safe management of patients not transported to hospital and mortality reviews.

7.4.1   Key Performance Indicators

The Ambulance Service of NSW has a range of key performance indicators collected for monitoring the quality of its service. The following have been identified at the **state** level as the most important in monitoring patient safety and clinical quality systems:

- Non-transportation rate
- Medication information obtained from elderly patients (TABLETS project)
- Percentage of patients intubated with CO_2 detectors used
- Defibrillator battery testing
- Serious trauma – time on scene
- Cardiac (suspected heart attack) – time on scene
- Deteriorating patient – patient observations during transport
- Open disclosure relating to SAC 1 incidents.

The majority of these data are captured through audit of the PHCR data sheets. Information on the performance of KPIs is available through the Business Objects[©] reporting system. The responses at the **division** level confirmed the routine analysis and review of a set of quality indicators and that the outcomes are reported to both the state and sector level regularly. All divisions use information about clinical risks to prioritise patient safety and quality improvement project initiatives. An example of this is was described by one of the divisions:

> *The collection of the KPI of time on scene <20 mins for suspected AMI was reviewed. A clinical improvement project was undertaken by a sector which consisted of reviewing data to validate and understand how this indicator was collected. Review of best practice of well performing stations was also undertaken. Using the CPI methodology the data was analysed and areas for focus/education to be undertaken by district officers identified. Outcomes and evaluation are ongoing.*

At the **sector** level, two sectors indicated that that they rarely or almost never receive information on their performance in some of the clinical indicators.

The process for the **state** to communicate changes in quality KPIs to divisions and sectors is through the relevant Standard Operating Policy *(SOP2008-012 – Protocol Change Management and Version Control Procedure)* and the patient safety and clinical quality newsletter. Performance of KPI step targets is monitored to ensure that modification to practice has been made in response to the changes.

At the **divisional** level all respondents were able to describe the process used for communicating changes to KPIs performance. An example of a division level response was:

Clinical bulletins are prepared by the patient safety officer and placed on the Ambulance service intranet; this link is emailed to all the staff of the Ambulance Service of NSW. The bulletin is also fax streamed to all stations and included in the agenda for Divisional Officer station visits and Station Managers Meetings.

At **sector** level the main method of communicating changes to KPI performance was through clinical alert bulletins, email and the intranet. In response to the question how do they ensure changes are made, an ad hoc or no formal procedure was in place for five of the eleven sectors.

Only one sector answered "none" to the question "What processes are in place to ensure that all stations have the most recent versions of protocols and pharmacologyies?" The remainder of the answers indicated that the sectors had a system of version control in place.

Recommendation:
The Ambulance Service of NSW must have systems in place to ensure that in relation to clinical indicators and Key Performance Indicators (KPIs):

- changes in policy and or KPIs are disseminated throughout the Service
- that the dissemination 'modes' are effective and
- there is a formal process to evaluate the implementation and efficacy of changes

7.4.2 Analysis and Performance Management

The state, division and sector levels were asked how they respond to unsatisfactory performance in a patient safety and clinical quality KPI. All levels responded that there is oversight and a specific process at their level where results of KPIs are continually monitored.

At **state** level, the response to any significant deterioration in a KPI on a statewide basis is described;

The item is flagged in the executive management board dashboard for exception reporting. If it is flagged red performance is more than 10% below the progressive target for the month; if the item is flagged orange then performance is within 10% of the progressive target. An example of strategic action taken is the publishing of a process map for time on scene for chest pain. This was the product of a clinical practice improvement project devoted to the issue of minimising time on scene for suspected myocardial ischaemia

If the issue relates to one particular division or sector, it is referred to the division's clinical quality committee for further analysis and investigation. The division in turn disseminates the information through to the sector level and improvement strategies are developed.

At **division** level, all four indicated that they analysed the following performance data provided by state:

- IIMS
- TABLETS
- Non transports
- CO_2 detector use in intubation.

The four **divisions** all described processes for analysing these data. All divisions responded that they review data on a monthly basis and analyse trends and, where any deteriorating trend is noted, use this information to address required improvements. The majority of divisions (three out of four) indicated that they utilised the Divisional Clinical Quality Committee (DCQC) meeting to refer patient safety and quality issues to the attention of state management.

The **sectors** described processes in place to review KPI performance data and 10 sectors indicated that they compared data with other sectors within the division, and four sectors compared data with sectors outside the division. The majority of sectors indicated that they communicated patient safety and quality issues to the next level via line management or via the DCQC.

Response from sector level
Sector Management respond to poor performance indicators by developing and implementing key local strategies and initiatives. Station Managers are also encouraged to develop new ideas to improve performance on a local level. The performances of KPIs are discussed each month with stations and where appropriate strategies are developed with staff to improve outcomes. KPI's are reported each month to the Divisional Level.

The survey demonstrates that the Ambulance Service has an established process for routine analysis and reporting of a set of key performance indicators.

7.5 Incident Management

Relevant Policy Framework

The NSW Health Incident Management Policy (PD2006_030) mandates the actions of area health services and the Ambulance service in response to clinical incidents that occur in the NSW health system. The policy details requirements for submission of reportable incident briefs; notification of incidents in the Incident Information Management System (IIMS); for open disclosure in the incident management process and for privileged Root Cause Analysis (RCA.) It provides relevant timeframes for providing the required reports to the NSW Health Department.

The Ambulance Service has an Incident Management Procedures policy (SPO2008-025) which outlines the processes and responsibility for initiating and managing incidents, reportable incident briefs and RCAs. This is supported by the responses of all of the divisions and all sectors except one who indicated that there was not a process for immediate (within 24 hours) reporting of SAC 1 and SAC 2 incidents to the sector management team. No reason was provided with this response.

At the **state** level, reports are sent to the Chief Executive who receives individual reports of RCAs and recommendations while the division, sector and station managers receive information *"….where relevant unless it has statewide application…"*

Eight of the **sectors** answered "No" to the question as to whether the sector receives information regarding the outcomes and recommendations of RCA analysis. An example of one sector response is: *"there is no formal process; notification of RCA recommendations appears to be ad hoc in nature".*

At the **state** level trended data for SAC 1, 2, 3 and 4 incidents are analysed at least quarterly. At the **division** level two of the four divisions indicated that they review and analyse the trended data for SAC 2, 3 and 4 incidents. Eight of the eleven sectors indicated that they receive information on SAC 2, 3 and 4 incidents. As the state service publishes reports on SAC incident trends there may be an issue of awareness of these reports in some divisions and sectors.

7.5.1 Correction of System and Process Deficiencies

Relevant Policy Framework

A key component of the clinical practice improvement cycle is the taking of action in response to data or studies which indicate potential vulnerabilities in systems and processes for delivering patient care. This is sometimes referred to as "closing the loop". There is no specific policy directing action by health services. For this reason this component of the QSA relies on open-ended questions aimed at establishing how the different levels of the system respond to clinical incidents and sub-optimal performance as measured in clinical indicators.

In response to the question "What system does the state level have in place to monitor changes that are made in response to investigation and analysis of clinical incidents?" the response at the **state** level was to monitor IIMS for any recurrence of the problem. Two examples were given to demonstrate improvements implemented at the state level in response to analysis of clinical incident recommendations. These were the provision of cool compartments in rural settings to provide thermo storage for drugs and the receipt of funding to study the use and effect of sodium bicarbonate for treating cardiac arrest patients.

The survey asked divisions and sectors about the process for responding to issues identified through analysis of incident data from IIMS and RCA recommendations, and the follow-up to ensure satisfactory implementation of required changes.

The **division** level response identified that matters are raised through the Divisional Clinical Quality Committee or Divisional management Committee and reviewed for appropriate action.

At the sector level in response to the question *"Does the sector receive information regarding the outcomes and recommendations of RCA analysis?"* only three responded yes. Overall the responses are characterised by a lack of any formal process with regard to ensuring changes are made in response to clinical incident investigation:

- *The only notification received is through the Divisional manager, issues are addressed, and there is no real process from state to allow us to be aware of the outcome*
- *Unable to comment as these matters are handled at state level*

The processes for monitoring and implementation of recommendations from clinical incident investigation do not appear to be clearly defined throughout the service.

Recommendation:

The Ambulance Service of NSW must ensure that the findings of any review of critical incidents or root cause analysis, is fed back to the relevant staff in a prompt manner and ensure that all officers are aware of the process for accessing this information.

7.5.2 Mortality Review

Relevant Policy Framework

As part of the Patient Safety and Clinical Quality program the NSW Department of Health set performance measures for Area Health Services including the Ambulance Service of screening all deaths within 45 days of the day of the event

The mortality review process for the Ambulance Service is governed by, Instructional Circular No: IC2006-027 which outlines the criteria for defining a reviewable death, the review procedure and responsibility. All reviewable deaths are almost always linked to the incident management system and trended data on reviewable deaths is provided to divisions and sectors or stations. Reviewable deaths are defined in the Instructional Circular as:"..*deaths that occur after first patient contact by the service but prior to arrival of patient to the hospital. Deaths following handover to receiving hospital are reviewed by the hospital.*

The process for managing and investigating reviewable deaths was described at the **state** level as:

Reviewable death outcomes are classified as:

- *Unavoidable deaths - which are the result of the natural course of the illness/trauma where no systematic clinical practice failure was apparent*
- *Avoidable deaths - where Ambulance systematic clinical practice may or may not have contributed to the death of the patient*

A reviewable death outcome other than unavoidable death may require:

- *Further information from the treating paramedic*
- *Further documentation from another agency such as coroner or police*

Figure 6 Division and sector response relating to awareness of death review process whether feedback is received regarding the review
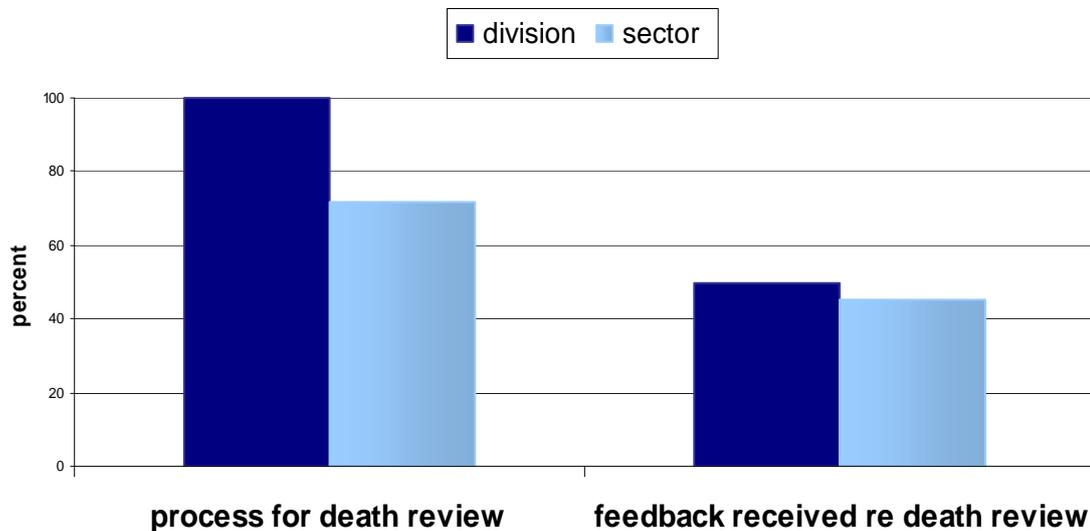
There is not concordance between the division and sector on the process for death review and feedback from death reviews. At the **division** level all (100%) of the divisions indicated that there was a process for a review of deaths which occur in the care of the Ambulance Service. Only two of the four divisions indicated that they receive any data or feed back on death reviews. At the **sector** level 72% (8) of respondents were aware of the process for death review while 45% (5) were able to explain what feedback they received in relation to the review of deaths (Figure 6).

For the annual year 2007 there were 140 deaths that underwent review: this represents 0.013% of all patients managed by the Ambulance Service. This would indicate that deaths whilst in the care of the Ambulance Service are a comparatively rare event, which in part may explain some lack of familiarity with the process of review. Not withstanding this it is important all officers of the service are aware of the policy.

Recommendation:

The Ambulance Service of NSW must have in place a consistent and timely process for auditing 'reviewable deaths' and ensure findings are fed back to the Clinical Governance Committee and relevant staff in a timely manner.

7.5.3 Open Disclosure

Relevant Policy Framework

The NSW Health policy on open disclosure (PD2007_040) aims to establish a standard, direct approach to communication with patients, families and carers after incidents involving potential injury or other harm to patients. The aims of the policy are to ensure that all NSW health services, including the Ambulance Service of NSW, have established consistent processes in place for open disclosure including a standard approach for communication after such incidents and to ensure that this occurs in an empathetic and timely manner.

The Ambulance Service of NSW has an open disclosure policy (SPO2007-033) which outlines the processes for undertaking open disclosure following an adverse event. The Professional Standards and Conduct Unit is further defining the process for open disclosure of SAC 1 and SAC 2 incidents.

At the **division** and **sector** level a series of questions were asked about open disclosure. The results are shown in Tables 4 and 5.

Table 4 Division level response - open disclosure (n=4)

	Almost Always	Often	Sometimes	Rarely	Almost Never
When a patient related clinical incident occurs, a senior manager involved in the care of the patient acknowledges the incident to the patient or their support person/carer	3				
An apology or expression of regret is provided to the patient when a patient related clinical incident occurs	1	2	1		
An explanation of known facts is provided	2	2			
A timeframe is agreed with the patient or their support person/carer to discuss causes when the investigation is complete and to update progress	1	2	1		
Support persons/carers are notified when incidents are referred to the coroner		1		3	
Support or advice from a senior colleague with experience in the open disclosure process is available to clinicians if requested	1	2	1		
Training in open disclosure is available	1	2		2	

Table 5 Sector level response - open disclosure (n=11)

	Almost Always	Often	Sometimes	Rarely	Almost Never
When a SAC 1 or SAC 2 clinical incident occurs, a senior manager involved in the care of the patient acknowledges the incident to the patient or their support person/carer	4	4	1	2	
An apology or expression of regret is provided to the patient when a patient related incident occurs	5	2	3	1	
An explanation of known facts is provided	6	2	3		
A timeframe is agreed with the patient or their support person/carer to discuss causes when the investigation is complete and to update progress	4	1	2	3	1
Support persons/carers are notified when incidents are referred to the coroner		1	1	3	6
Support or advice from a senior colleague with experience in the open disclosure process is available to clinicians if requested	7	2		1	1
Training in open disclosure is available	5	2	2	1	1

The responses from both division and sector levels indicate that the Ambulance Service has not achieved full implementation of the open disclosure policy. It should be noted that the service may be unaware of an incident requiring the open disclosure process due to late notification from the hospital or other organisation. In these cases the open disclosure process may not start until some time after a patient transport.

Recommendation:

The Ambulance Service of NSW must ensure the following steps are in place to support the implementation of the open disclosure policy:

- provide adequate training in the open disclosure process
- provide support for the staff involved in the process and
- ensure adequate documentation in the patient health care record.

7.6   Complaints Management

Relevant Policy Framework

NSW Health Complaint Management Policy (PD2006-073) aims to support clinicians and managers in responding effectively to clinical and corporate complaints that arise. The policy makes clear that complaints provide unique information about the quality of health care from the perspective of consumers and carers. Management of complaints provides the opportunity for complainants to have their issues resolved effectively, ensures that any identified risks are managed appropriately and that action is taken to minimise or eliminate those risks.

The NSW Health complaint management policy applies to PHOs including the Ambulance Service of NSW. The service has developed the Complaints Management Policy (SOP2007-019) which outlines the process to manage complaints by patients or their carers. Complaints against the Ambulance Service are sent to the central Professional Standards and Conduct Unit (PSCU). These complaints are either referred to sectors for response or some may be dealt with centrally.

Both the **state** and **division** responses in the survey indicated that there was a policy and process for the management of patient complaints. The IIMS database is used as the main repository of information regarding patient complaints. The **state** survey indicated that analysis of complaints is undertaken at a state level. Information relating to complaints and the process for management of outstanding complaints, including KPIs is provided monthly to the CE, clinical governance committee and divisional managers.

At the **sector** level seven out of the eleven respondents indicated that they received information or data regarding complaints; that they analysed the data to detect trends; and provided data to the division in relation to complaints for which they assigned responsibility to an individual to manage. An example of a response from a sector is provided below:

> *Complaints are received and registered in IIMS and on the Divisional Register. An investigating officer for each complaint is nominated and required to investigate within a three week timeframe. The results/actions are logged on IIMS and confirmed to be appropriate or not and then the actions are completed to close out the complaint. Delays in the process are required to be entered into IIMS and a weekly email from State (Clinical Development Unit) provides information on all outstanding complaints and the number of days that they have been in the system.*

A wide variety of information is available to the public to inform them of how to make a complaint about their treatment by the Ambulance Service, including:

- Brochure
- Web site
- Complaints officer and
- Helpline.

The QSA survey responses by the state, division and sectors indicates that the Ambulance Service appears to have effective systems in place both to receive and respond to complaints and to review the information in a systematic way.

7.7 Review Activities

7.7.1 Clinical Audit

Relevant Policy Framework

Clinical audit is a quality improvement process which seeks to improve patient care and outcomes by systematic review of care against explicit criteria and the implementation of any changes to care delivery that may be required.

The Ambulance Service Clinical Action and Audit Plan provide a framework for monitoring and reporting of clinical standards and KPIs.

> *State level response*
> *The clinical audit plan also acts as a progress report which documents follow up actions after audits and can be reported for endorsement of immediately required action to the executive management board. The clinical audit plan and progress report is also a standard agenda item for the clinical governance committee whose role it is to monitor that appropriate action has been taken in conducting and following-up the audits.*

All four **divisions** responded that clinical audits are undertaken within their division. When asked to describe the clinical audit process responses were variable. Some responses describe the process as "*random*" or "*activities of the DCQC*"

All **sectors** describe undertaking clinical audit. However there is variability in the processes used for clinical audit with, generally an ad hoc approach to the audit process. See below for examples of the description of the clinical audit process at this level.

> *Sector level responses*
> - *Usually occurs through the divisional clinical quality committee representatives on each station determining an area of audit and implementing a process to capture information. Again an excellent approach, however, usually relies on the good will of a few good people and remains unfunded at this level.*
> - *Occurs only for cardiac arrests*
> - *Clinical audit is part of the station's monthly process but very ad hoc*

Recommendation:

Working in partnership with NSW Health, the Ambulance Service of NSW must establish 'best practice' models for staff to undertake clinical audit, patient health care record review, peer review or other quality review activities.

7.7.2   Patient Health Care Record Review

The QSA survey defined patient health care record review as "*….a process where medical records are reviewed and general screening criteria are used to identify adverse events or breaches in standrards of care.*"

At the **state** level there is no policy or guideline for the review of the patient health care record to identify adverse events related to patient care. This task is seen as part of the station officer's roles and responsibilities.

In response to the question "Is there a system in place to review health care records for possible adverse patient related clinical incident?" three **divisions** answered "yes" and one "no".

From the **sector** survey on the question of whether there was a system for the review of patient health care records: two said that this occurred at their level, eight said that this occurred at station level and one sector said no. Examples given of the process of health care record review at sector level included the following:

Sector level responses
- *Station Officers review all cases and if there are discrepancies they discuss these with the officer/s concerned*
- *This is undertaken by the Station Officer when checking PHCRs, it is not a formal process*
- *Station Officers review and clinically audit PHCR's. PHCR review Officers Analyse PHCR sheets for KPI compliance, Abnormalities dealt with through Clinical Educators and Sector Office. Option for the use of IIMS when required. If a PHCR is questioned then it's reviewed with the clinical training officer (CTO). If Officers have had a misunderstanding of protocol procedure, then the CTO visits the Station to clarify the problem. If an Officer makes a variation to protocol or procedure, then an IIMS notification is submitted to the education department for review*

Recommendation as per 7.7.1:
Working in partnership with NSW Health, the Ambulance Service of NSW must establish 'best practice' models for staff to undertake clinical audit, patient health care record review, peer review or other quality review activities.

7.7.3 Peer Review

The QSA survey defined peer review as "*….the evaluation of performance by other people in the same field in order to maintain or enhance the quality of the work or performance in that field."*

Currently there is no state guideline or policy relating to peer review in NSW Health. The Ambulance Service does not have a statewide policy. At **division** level one indicated that there was peer review in all sectors, one indicated it occurred in some sectors and two answered that they did not have peer review occurring.

These answers were consistent with the responses at the **sector** level, where seven sectors indicated that peer review activities were conducted in some stations and three indicated that peer review activities were conducted in all stations.

The lack of consistency in these responses reflects the lack of formal policy underlying the practice of peer review, which is indicative of the system as a whole, not just the Ambulance Service of NSW. Examples of the peer review process occurring at sector level included the following:

Sector level responses
- *Generally a meeting involving peers is held to discuss recent interesting and potentially informative incidents that have been attended*
- *Discussions with staff involved. No blame atmosphere, look at how things can be done better*
- *Station Manager or delegated officers will review PHCR's monthly returns*
- *It is an informal process that involves those officers willing to participate, it is ad hoc in nature*

Recommendation as per 7.7.1:
Working in partnership with NSW Health, the Ambulance Service of NSW must establish 'best practice' models for staff to undertake clinical audit, patient health care record review, peer review or other quality review activities.

7.7.4 New Interventional Procedures

SOP2007-025 guides the safe introduction of new interventional procedures into clinical practice in Ambulance Service of NSW. This policy involves the review and endorsement of the interventional procedure by the Ambulance Clinical Advisory Committee. The definition for what constitutes a new interventional procedure is outlined in the policy.

At the **state** level, credentialing and training and education programs are the method by which new devices or procedures are introduced and any technical issues in implementation are addressed.

> *Each new intervention must have an implementation plan that clearly states the implementation process, audit, compliance and monitoring aspects of the new intervention/procedure*

Three of the four **divisions** agreed that they "*almost always*" receive information about the performance of new interventions being piloted in their area. The fourth division indicated they were informed "*sometimes*". Credentialing to perform the new procedure is coordinated through the state Clinical Development (Education).

> *Once a clinician has been assessed by the Clinical Training Officers (CTOs) as competent, the education department advises the sector the names of the officers approved to undertake the new intervention.*

From the responses it is evident that there is good awareness at the **sector** level of the process and level of responsibility for credentialing clinicians to perform any new intervention.

> *No new interventions have been trialled in the sector. However a training program would be established and officers successful in training would receive written confirmation as well as a copy to sector management.*

Six of eleven sectors indicated that they "*almost never*" receive information about the performance of new interventions being piloted in their area.

Recommendation:

The Ambulance Service of NSW must ensure that communication regarding the piloting and introduction of new procedures is effectively provided to operational units
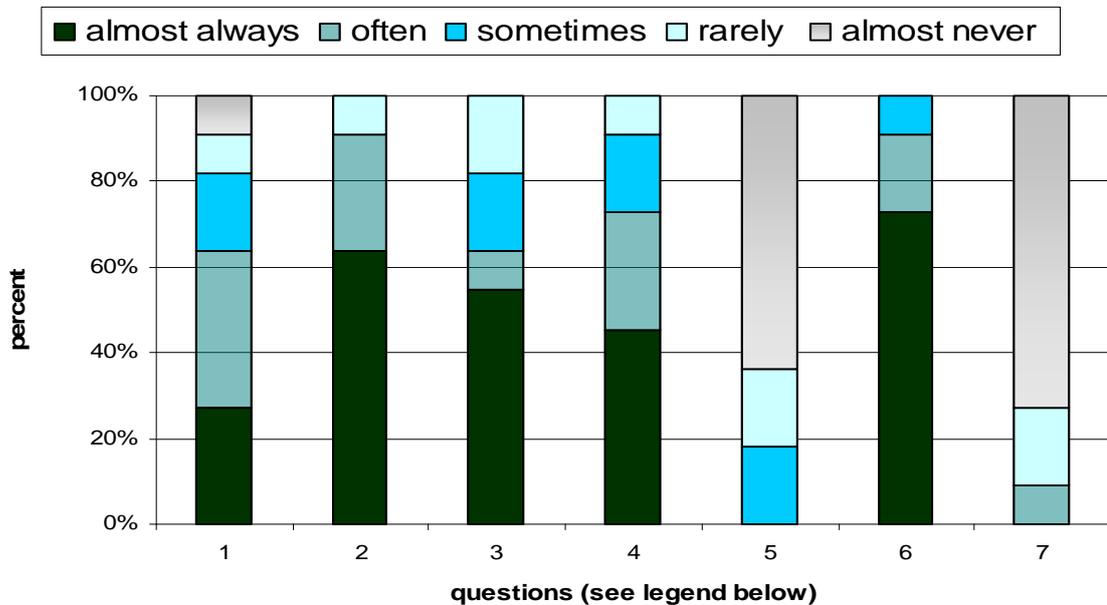
7.7.5 Infection Control

Relevant Policy Framework
There is a system-wide policy (PD2005_247) which outlines the broad principles of infection control. It is intended as a broad framework within which all NSW health organisations can develop detailed operational guidelines appropriate to their own health care settings. There is also a policy that applies to the management of critical infection control incidents (PD2005_203) which outlines the responsibilities of health services, following any reportable incident involving infection control. *ASNSW has an infection control policy (SPO2008-027)*

A series of questions on infection control practices was included in the **sector** survey. The response to these questions is shown in Figure 7.

Figure 7 Sector level response to activities related to infection control

Questions relating to infection control – sector level

1. Hand washing occurs between patients
2. Hand washing occurs before and after touching contaminants regardless of whether gloves were used
3. Gloves / eye protection worn during procedures / patient contact where splashes or sprays may occur
4. Gloves are changed between each patient
5. Fluid resistant gowns are worn during procedures or patient contact, where splashes or sprays may occur
6. Alcohol based hand-rub is situated in each vehicle, front and rear
7. Observational studies of hand washing occur

The Ambulance Service of NSW was involved in the Clean Hands Save Lives Campaign and while the availability and use of alcohol gels was an established practice within the service, undertaking observational studies has not occurred routinely.

Overall the responses to the activity statement questions indicate a moderate level of compliance with infection control guidelines. Considering the operational realities under which Ambulance officers are working this may require further assessment of work practices. In future surveys the QSA questions may require some modification to reflect these realities, for example *"At the scene of a multi-person, multi-trauma accident what is the practicality of hand washing between each patient?"*

Recommendation:

The Ambulance Service of NSW continue to adapt current NSW health policies on infection control that meets the specific needs and challenges of the Ambulance Service and audit performance against this policy.

7.7.6 Drug Calculator

The **state** level survey asked what percentage of officers has been provided with a standard issue personal drug calculator. The same question was asked at the sector level

Figure 8 State and sector level response to the question: Are Ambulance officers issued personal drug calculators
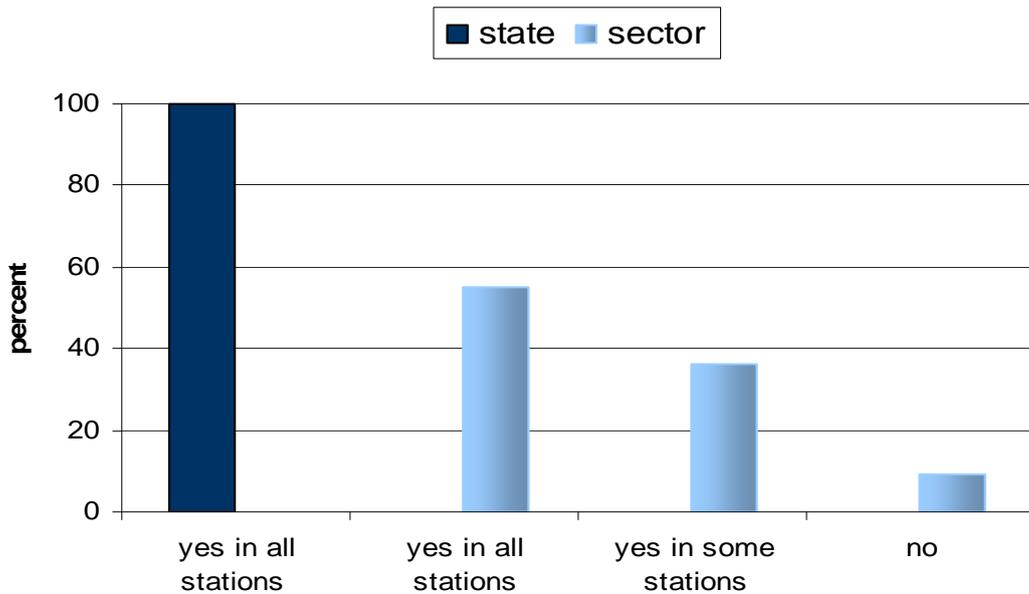
The state level response indicated that 100% of officers are issued with a personal drug calculator: at the sector level 55% answered yes to having officers in all stations issued with a drug calculator (Figure 8).

There is a lack of concordance between the state and the sector levels as to the issue of drug calculators to all Ambulance officers. This issue may need to be reviewed in more detail by Clinical Development.

7.7.7 Blood Pressure (BP) Cuff in Medical Bag

As part of the TABLETS program and to act as a prompt to take patient medications to hospital BP cuffs are stored in a dedicated patient medication bag in the Ambulance vehicle.

The **sector** activity statement asked if a blood pressure cuff was *"stored in a patient medication bag within the Oxy-viva in all Ambulances in the sector?"*

Figure 9 Sector level response to question: "Blood pressure cuff is stored in a patient medication bag within the Oxy-viva in Ambulances"
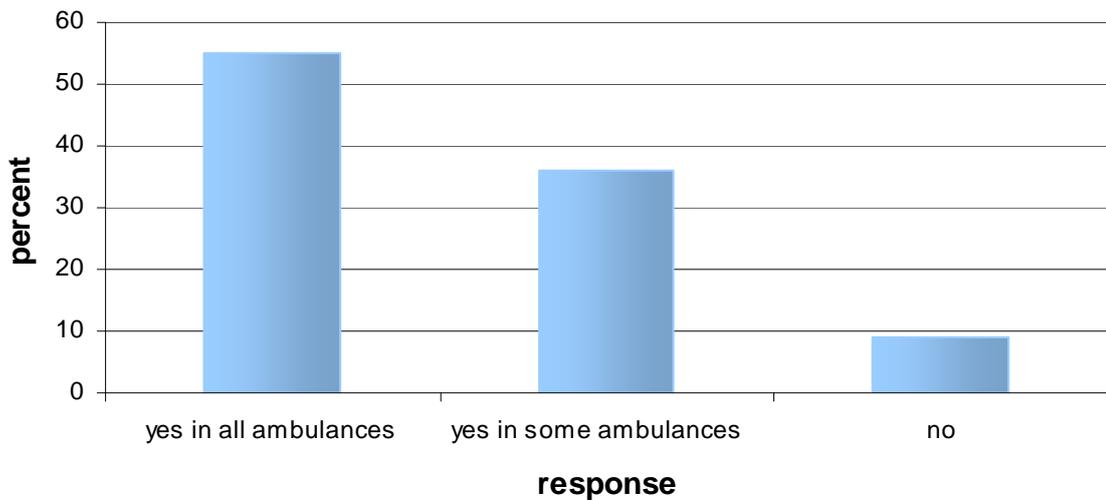
The response showed that 55% of the sectors had the BP cuff in all trucks while 9% responded that this did not occur (Figure 9).

As compliance with TABLETS is identified as one of the main KPIs for the Ambulance service there is an opportunity to improve performance in this area. The CEC strongly supports the continued tracking of this KPI by the Ambulance Service.

8 Qualitative analysis of nominated highest risks to patient safety

As part of the self assessment the **division** and **sector** levels were asked to nominate what they considered or had identified were the three main risks (in no particular order) to patient safety. A content analysis was undertaken by the QSA project team to identify patterns and common themes.

The risks identified by the four **divisions** can be grouped into three common themes. These are:
- Non transport of patients
- Performance
  - Time on scene for specific conditions
  - Incorrect procedures
  - Medication management
- Patient health care record compliance

The types of risks identified at the **sector** level can be categorised under the headings of:
- Staffing / workload / experience of officers
  - Recertification documentation is up-to-date
  - Lack of experience with critical patients (rural setting)
  - Skill mix
- Patient health care record
  - Compliance / completion
- Unable to respond due to outside influences such as:
  - Emergency Department access block
  - Appropriate escorts for long distance transport of critical patients
  - Distance to patients
- Non transports
- Patient management issues
  - Recording observations
  - Recognition of deteriorating patient
- Communication / governance at station level

Expectation of CEC:

The Ambulance Service of NSW should review the identified risks to patient safety (above) and focus improvement activities on those risks that pose the greatest harm to patients, either because of the frequency of occurrence or the level of harm caused.

Two risks that were identified by both levels were non transport of patients and the issues around completion and compliance of the patient health care record. These are further discussed below.

Risks identified by both the division and sector levels.

Examining the risks identified by both divisions and sectors there are some common themes. In particular, three of the four divisions identified the safe management of patients not transported to hospital as a risk to patient safety; this issue was also nominated by several of the sectors. A number of initiatives have been undertaken by the Ambulance Service with regard to the non transport of patients the specific issues and projects are described below.

Non transport of patients

Non transports relate to situations where patients decline Ambulance transport to hospital. The current standard for the Ambulance Service is that all patients seen by an Ambulance officer should be transported to hospital for assessment. Often Ambulance officers are confronted by patients who either refuse to be taken to hospital or who ask the officer for advice on whether they should go to hospital. This is not within the scope of practice for most Ambulance officers in NSW. There are approximately 200,000 non transports per annum, which is about 20% of the total Ambulance call outs.

In the eleven months from September 2005 to August 2006 there were 17 SAC 1 incidents, 11 (64%) of which related to non transport. As a result, the Ambulance Service of NSW has instituted a number of programs and protocols, which include development of KPIs, designed to reduce the potential for poor outcomes for patients in these situations.

The first significant protocol for non transport was introduced in November of 2006. Protocols for management of non transports include:

- Protocol P2 (patient or carer declines or refuses transport) – once the patient has been assessed and refuses transport an explanation regarding the risk of non transport is given to the patient and / or carer. If the patient or carer declines or refuses assessment, treatment or transport the attending officers assessment and reason for non transport is documented on a patient healthcare record (PHCR) and a Patient Advice Card is issued. The patient or carer signs the patient refuses / declines treatment / transport section or the PHCR.
- Protocol P3 (Special projects) – this protocol outlines the process where patients (65 years or older or 45 years if Aboriginal or Torres Strait Islander) are assessed against the Sub Acute Fast Track Elderly (SAFTE) criteria. Patients who live in specific Local Government Areas with District Hospitals providing the SAFTE services can be assessed and referred to a SAFTE care team and be managed at home without transport to the hospital. Only qualified paramedics, ALS paramedics and intensive care paramedics are authorised to use this protocol. Non authorised officers can request a referral for assessment.

- Protocol P4 (Non transport incidents (interim)) – this protocol is used for all call outs where transport does not occur following contact with a patient and the previous protocols do not apply. This protocol includes those patients seen or treated in station casualty rooms and not transported to hospital. The same process as protocol P2 is followed with documentation of the assessment and patient refusal documented in the PHCR.

Two initiatives introduced by the Ambulance Service that target the issues and risk around the non transport of patients, are the introduction of Extended Care Paramedics (ECP) and the CARE (Clinical Assessment and Referral) program.

Extended Care Paramedics (ECPs) are experienced paramedics able to provide emergency care in accordance with current Ambulance protocols, procedures and pharmacology. ECPs have been trained and credentialed to identify the clinical needs of patients and determine the most appropriate disposition for the patient. ECPs follow a clinical decision making algorithm that aims to identify patients with presentations that either need to go to an emergency department, be referred to a General Practitioner or community based services or for specific patient presentations they can provide immediate care.

The Clinical Assessment and Referral (CARE) program offers non transport clinical referral pathways to patients presenting with specific low acuity conditions after assessment by specially trained / certified paramedics. CARE paramedics provide clinically safe low acuity patients with alternative to transport to an Emergency Department. Using a set of evidence based clinical criteria, CARE paramedics are able to identify suitable low risk patients and have the authority to offer non transport options that may involve referral to health carers such as general practitioner, community nursing, aged care teams and dental services.

The effectiveness of these protocols and new initiatives has been reflected in the decreased number of incidents relating to non transports. In the 26 months from Aug 2006 to November 2008 there were 13 SAC 1 incidents; none of these related to non transport.

Recommendation:
The Ambulance Service of NSW needs to continue to carefully review current policies and practice in regard to non transport of patients, such as CARE and ECP, and identify opportunities to improve existing protocols.

Patient Health Care Record

The compliance in satisfactorily completing the Patient Health Care Record (PHCR) was another key theme identified by both division and sector respondents. The PHCR is an A3 form that requires the Ambulance officer to manually record the patient's history, observations and relevant treatment information. The PHCR is a carbon copy form and requires time and attention to ensure accurate completion of all relevant fields.

An example of issues that arise with the PHCR was given by a sector in response to describing the clinical audit process.

> PHCR are sent to officers nominated within the sector to complete a review. Over a period of several months it was noted that there was a drastic reduction in performance of compliance in Aspirin administration to patients whose main complaint was chest pain. An aspirin audit was conducted for two sectors. Manual data was obtained from PHCRs for a given month with the total number of chest pain cases compared to how many of them received Aspirin calculated. Manual audit results in both cases were higher than the computer generated data figures. These findings and issues related to data collection were discussed at the divisional meeting.

Recommendation:

The Ambulance Service of NSW needs to continue its current audits of the patient health care record.

9   Next Steps

The 2008 / 2009 QSA survey of the Ambulance Service of NSW will take place in the second half of 2009. The 2008 / 2009 survey will be a more targeted survey focusing on areas where improvement is indicated, based on the 2007 baseline survey findings. The survey questions for the 2008 survey will be developed over the next three months following analysis and review of the 2007 data and discussion with NSW Health Quality and Safety Branch, Ambulance Service Clinical Development and the QSA advisory committee.

Verification

Following the QSA self assessment, verification activities will be undertaken. The purpose of verification is to determine accuracy of responses, add further depth to information provided in the activity statements and collect information that will be used to inform subsequent assessments. Verification activities can be divided into two groups:

First – activities that verify all responses through correlation of assessment responses and analysis of evidence provided in the activity statements.

Second – an onsite review of the levels assessed in the Ambulance Service. The onsite visits will occur to a sample (approx 20% of respondents) across the state. It is planned that the verification activities will occur over a 2 - 3 day timeframe with the focus limited to specific key issues identified in the QSA. Improvement plans developed in response to the recommendations will also be reviewed. The area / division / sector chosen for the visit will receive adequate notice regarding the timing of the visit and requirements of the reviewers.

 Recommendation:
The CEC needs to develop a targeted assessment for the 2008 / 2009 QSA based on the issues identified from this report. The 2008 / 2009 survey will include station officer level.

10   Bibliography

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NSW Health Department (2005) *Corporate Governance and Accountability Compendium* NSW Health Department

NSW Health Department (2005) *NSW Clinical Governance Directions Statement,* NSW Health Department

Appendix One

Relevant NSW Health / Ambulance Service policies and CEC projects in each of the six QSA assessment domains

Governance

Relevant NSW Health and ASNSW Policies	*Relevant CEC Projects*
A Framework for Managing the Quality of Health Services (1999) Patient Safety and Clinical Quality Program (PD2005_608) NSW Patient Safety and Clinical Quality Program Implementation Plan (PD2005_609)) Corporate Governance and Accountability Compendium (2005) NSW Clinical Governance Directions Statement (2005)	Quality Systems Assessment (QSA)

Risk management

Relevant NSW Health and ASNSW Policies	*Relevant CEC Projects*
A Framework for Managing the Quality of Health Services (1999) Risk Management Framework (SOP2008-012) Certification policy (SOP2007-10) CTP (certificate to practice) Compliance (SOP2007-110)	Incident Information Management System (IIMS) Hand Hygiene

Clinical indicators

Relevant NSW Health and ASNSW Policies	*Relevant CEC Projects*
A Framework for Managing the Quality of Health Services (1999)	Incident Information Management System (IIMS)

Incident management

Relevant NSW Health and ASNSW Policies	*Relevant CEC Projects*
A Framework for Managing the Quality of Health Services (1999) Incident Management Policy (PD2006_030) Open Disclosure (PD2006_069) / (SOP2008-025) Mortality Reviewable Deaths (IC2006-027)	Incident Information Management System (IIMS)

Complaints management

Relevant NSW Health and ASNSW Policies	Relevant CEC Projects
A Framework for Managing the Quality of Health Services (1999) Complaints Handling Frontline – Better Practice Guidelines (GL2005_061) Complaint Management Guideline (GL2006_023) Complaint Management Policy (updated) (PD2006_073) Complaint or Concern about a Clinician (GL2006_002) Complaint or Concern about a Clinician – Principles for Actions (PD2006_007) Complaints Management Policy (SOP2007-019)	Incident Information Management System (IIMS)

Review activities

Relevant NSW Health and ASNSW Policies	Relevant CEC Projects
A Framework for Managing the Quality of Health Services (1999) Clinical Practice – Model Policy for Safe Introduction of New Interventional Procedures (PD2005_333) Safe Introduction of New Interventional Procedures into Clinical Practice (SOP2007-025) Infection Control Policy (PD2005_247) Infection Control Management of Reportable Incidents (PD2005_203) Procedures for Occupational Assessment, Screening & Vaccination against Specified Infectious Diseases (SOP2008-027) Correct Patient, Correct Procedure and Correct Site (PD2007_079) Correct Patient, Correct Procedure & Correct Site (SOP2007-016) ASNSW Clinical Action and Audit plan	Safety Improvement Program Clinical Leadership Program Clinical Practice Improvement training E-learning

Glossary of Terms

QSA Ambulance Service Report

ACHS	Australian Council on Healthcare Standards
AHS	Area Health Service
ASNSW	Ambulance Service of NSW
CARE	Clinical Assessment and Referral program
CDU	Clinical Development Unit
CE	Chief Executive
CEC	Clinical Excellence Commission
CPI	Clinical Practice Improvement
CTO	Clinical Training Officer
CTP	Certificate to Practice
DCQC	Divisional Clinical Quality Committee
DG	Director General
DO	District Officers
ECP	Extended Care Paramedics
ED	Emergency Department
IIMS	Incident Information Management System
IT	Information Technology
KPI	Key Performance Indicator
KPMG	KPMG Risk Advisory Services
MRSA	Multi Resistant Staphylococcus Aureus
NSW DOH	New South Wales Department of Health
NSW QSB	New South Wales Health Quality and Safety Branch
PHCR	Patient Health Care Record
PHO	Public Health Organisation
PRMC	Performance and Risk Management Committee

Glossary of Terms: cont.

PSCQP	Patient Safety and Clinical Quality Program
PSCU	Professional Standards and Conduct Unit
QSA	Quality Systems Assessment
RCA	Root Cause Analysis
SABS	Safety Alert Broadcast System
SAC	Severity Assessment Code (1- 4)
SOP	Standard Operating Policy
SAFTE	Sub Acute Fast Track Elderly
TABLETS	Tablets are Bagged Letting Emergency Treat Safely

Acknowledgements

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